

REMARKS

The Official Action dated February 19, 2002, has been carefully considered. A petition to revive this application for unintentional abandonment accompanies this response. Consideration of the changes and remarks presented herein and reconsideration of the rejections are therefore respectfully requested.

The specification has been amended in accordance with the objections set forth by the Examiner in the present office action. Particularly, headings have been added to the specification. It is believed that these changes do not involve any introduction of new matter.

By the present amendment, claims 1-11 have been canceled, while claims 12-24 have been respectively added, finding support in the specification, drawings and claims as originally filed. It is believed that these changes do not involve any introduction of new matter, and thereby entry is believed to be in order and is respectfully requested. Claims 12-24 remain in the case for consideration.

In the Official Action, the Examiner noted the receipt of the Information Disclosure Statement previously filed, but indicated that no Form PTO-1449 had been submitted. In light of this, Applicants submit Form PTO-1449 listing the references previously provided by the International Bureau and by the Applicants as indicated in the Supplemental Information Disclosure Statement.

The Examiner also requested a proposed drawing correction. Proposed drawing corrections have been submitted to address objections set forth by the Examiner to FIGS. 1 and 2.

In the Official Action, claims 2, 4, 6 and 9-11 were rejected under 35 U.S.C. §112, second paragraph, as indefinite. The Examiner noted several informalities in the claims. It is believed that the informalities noted by the Examiner are overcome by presentation of claims

12-24. Accordingly, the rejection is traversed, as Applicants believe claims 12-24 are definite and respectfully request that the Examiner reconsider the rejection under 35 U.S.C. §112, second paragraph.

In the Official Action, claims 1, 3 and 4 were rejected under 35 U.S.C. §102(b) as being anticipated by German Patent No. DE 35 36 974 A1 (hereinafter referred to as "DE '974"). The Examiner asserted that DE '974 teaches a self-propelled cleaning robot which moves along a surface to be treated. The Examiner also stated that DE '974 discloses the machine having a driving mechanism consisting of wheels with individual motors. Moreover, the Examiner asserted that DE '974 includes moisture sensors and safety switches which prevent the machine from approaching too close to the edges of the surface being processed.

However, as will be set forth in detail below, it is submitted that the self-propelled robots as defined by canceled claims 1, 3 and 4, and now set forth in claims 12-24, are not anticipated by the teachings of DE '974. Accordingly, this rejection is traversed and reconsideration is respectfully requested.

As defined by claim 12, from which claims 13-24 depend, the present invention is directed toward a self-propelled robot configured for movement over a trackless surface. The robot includes a power supply, a traction mechanism, a dispense mechanism, a plurality of navigation sensors, one or more deposition detectors and a control system. The traction mechanism is configured to receive power from the power supply and move the robot over a trackless surface. The dispense mechanism is adapted to controllably deposit a fluent material onto the trackless surface. The navigation sensors provide signals for enabling the robot to navigate over the trackless surface. The one or more deposition detectors are adapted to detect the presence of the fluent material on the trackless surface and provide

signals indicative thereof. Finally, the control system is configured to receive the signals from the navigation sensors and the one or more deposition detectors and operably dependent upon the signals to control the traction and dispense mechanisms.

DE '974 discloses an operatorless, externally controlled machine where the control occurs by way of a non-permanent guide track (abstract). Moreover, DE '974 teaches that the non-permanent guide track can consist of a linear-shaped strip of a substance, such as a liquid or powder (page 6). However, Applicants find no teaching or suggestion by DE '974 of a self-propelled robot as defined in claims 12-24. Particularly, Applicants find no teaching by DE '974 of a robot as claimed and including a traction mechanism configured to receive power from the power supply and move the robot over a trackless system. Rather, DE '974 employs a guide track.

Rejection for anticipation or lack of novelty require, as the first step in the query, that all elements of the claimed invention be described in single reference. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989), *cert. denied*, 493 U.S.P.Q.853 (1989). Applicants are unable to find any teaching or disclosure by DE '974 of a self-propelled robot configured for movement over a trackless surface as defined by the present claims. To anticipate, every element and limitations of the claimed invention must be found in a single prior art reference, arranged as in the claim. *Karsten Mfg. Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1383, 58 U.S.P.Q.2d 1286, 1291 (Fed. Cir. 2001); *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 927 F.2d 1565, 1576, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991). Applicants find no teaching or disclosure in DE '974 of any such self-propelled robot configured for movement over a trackless surface. In fact, the DE '974 reference requires that the disclosed machine moves along a non-permanent

guide track in order to operate. As such, the self-propelled robot in the present invention is not taught or disclosed by DE '974.

It is therefore submitted, that the presently claimed self-propelled robots are not anticipated by DE '974, whereby the rejection under 35 U.S.C. §102 has been overcome. Reconsideration is respectfully requested.

Claims 2 and 9-11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over DE '974 in view of the Kawakami et al U.S. Patent No. 5,613,261 (hereinafter referred to as "Kawakami et al"). The Examiner once again asserted the teachings of DE '974. The Examiner also asserted that Kawakami et al teach a robot for cleaning floors in which the rate of cleaning solution dispensed would depend on the amount of dirt on a floor. As such, the Examiner contended that one having ordinary skill in the art would have found it obvious to control the rate of deposit based on the condition of the surface to be treated. Moreover, the Examiner asserted that that the claimed invention differs only in the arrangement of the collision sensors around the robot, and alleged that the arrangement of the collision sensors around the robot is only a function of the geometry of the robot and the degree of collision protection desired. Once again, the Examiner found that it would have been obvious to one having ordinary skill to take such design features into consideration in arranging the collision sensors.

However, Applicants submit that the self-propelled robot and method of using the same set forth in canceled claims 2 and 9-11, now set forth in the present claims, are nonobvious over DE '974 in view of Kawakami et al. Accordingly, this rejection is traversed and reconsideration is respectfully requested.

The deficiencies of DE '974 are discussed above. Kawakami et al do not resolve these deficiencies as Applicants found no teaching or suggestion by Kawakami et al of a self-propelled robot configured for movement over a trackless surface as recited in claim 12.

References relied upon to support a rejection under 35 U.S.C. §103 must provide an enabling disclosure, i.e., they must place the claimed invention in the possession of the public, *In re Payne*, 203 U.S.P.Q. 245 (CCPA 1979). The failures of DE '974 are not remedied by the combination with Kawakami et al. In view of the failure of DE '974 and Kawakami et al to teach or suggest of a self-propelled robot configured for movement over a trackless surface as defined in claim 12, DE '974 and Kawakami et al do not support a rejection under 35 U.S.C. § 103. Applicants therefore submit that the 35 U.S.C. § 103 rejection of the presently claimed self-propelled robot and method of using the same in light of DE '974 in view of Kawakami has been overcome. Reconsideration is respectfully requested.

Claims 5-8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over DE '974 in view of the Sekiguchi et al, "A Mobile Robot by Multi-Hierarchical Neural Network," IEEE, Conf. on Robotics and Automation, May 1989, vol. 3, pp. 1578-83 (hereinafter referred to as "Sekiguchi et al"). Once again, the Examiner asserted the teachings of DE '974. The Examiner also asserted that Sekiguchi et al teach multi-hierarchical neural networks are used to process input information and to adapt the operation of the robot to its environment. As such, the Examiner contended that one having ordinary skill in the art would have found it obvious to apply the teaching of Sekiguchi to the robot of DE '974 because it would have provided a control structure in which the robot could readily adapt its operation to its changing environment.

However, Applicants submit that the self-propelled robots set forth in canceled claims 5-8, now set forth in the present claims, are nonobvious over DE '974 in view of Sekiguchi et al. Accordingly, this rejection is traversed and reconsideration is respectfully requested.

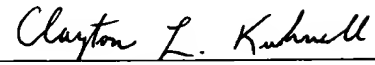
As previously noted, the deficiencies of DE '974 are discussed above. Sekiguchi et al do not resolve these deficiencies as Applicants found no teaching or suggestion by Sekiguchi et al of a self-propelled robot configured for movement over a trackless surface as recited in claim 12.

Once again, references relied upon to support a rejection under 35 U.S.C. §103 must provide an enabling disclosure, *In re Payne, supra*. The failures of DE '974 are not remedied by the combination with Sekiguchi et al. In view of the failure of DE '974 and Sekiguchi et al to teach or suggest of a self-propelled robot configured for movement over a trackless surface as defined in claim 12, DE '974 and Sekiguchi et al do not support a rejection under 35 U.S.C. § 103. Applicants therefore submit that the 35 U.S.C. § 103 rejection of the presently claimed self-propelled robot based on DE '974 in view of Sekiguchi has been overcome. Reconsideration is respectfully requested.

It is believed that the above amendments and remarks represent a complete response to the Examiner's rejections under 35 U.S.C. §§ 102, 103 and 112, second paragraph, and as such, place the present application having claims 12-24 in condition for allowance. Reconsideration and an early allowance are requested.

Serial No. 09/743,933
Amendment dated December 3, 2003
Reply to Official Action of February 19, 2002

Respectfully submitted,



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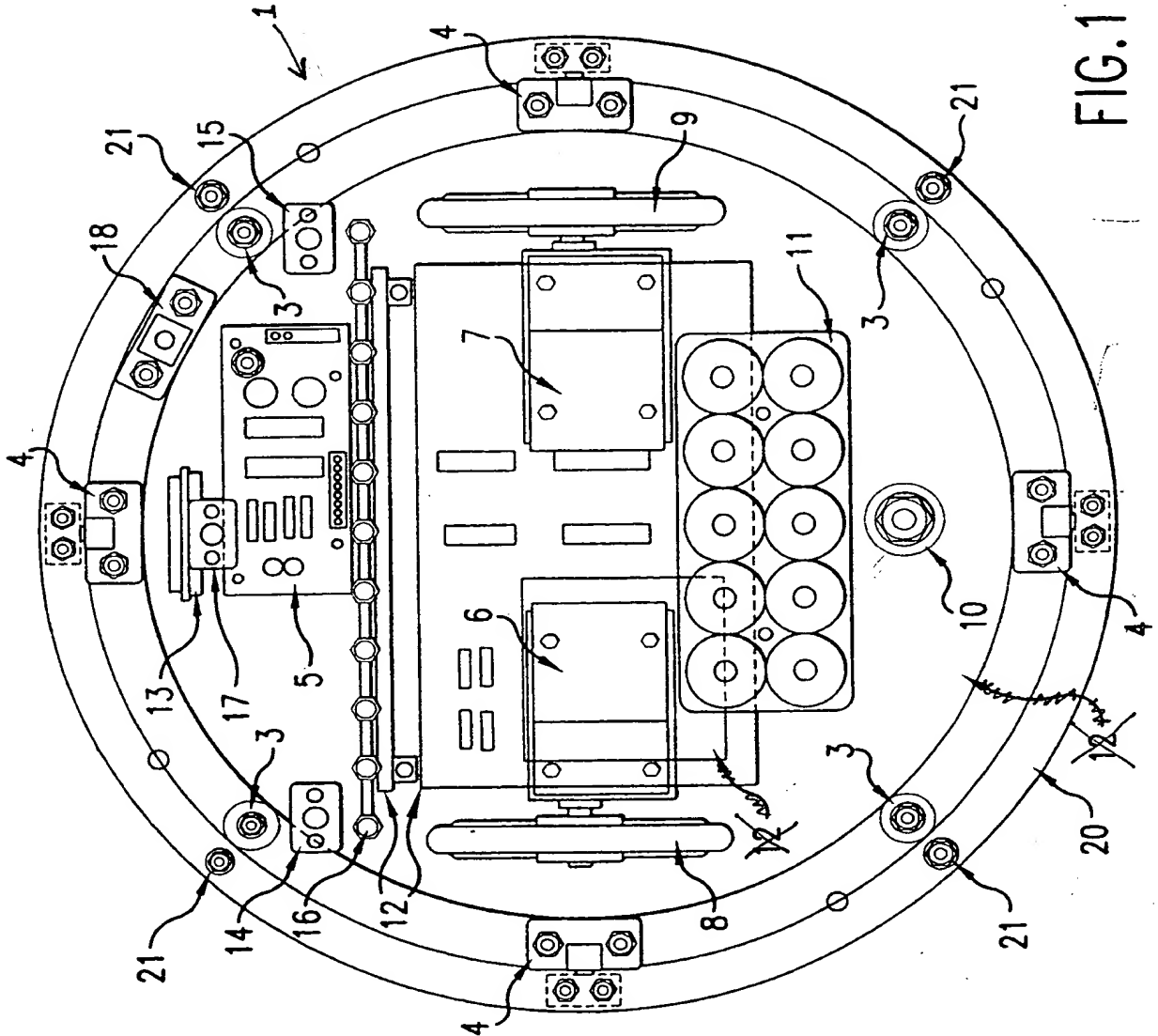


FIG. 1

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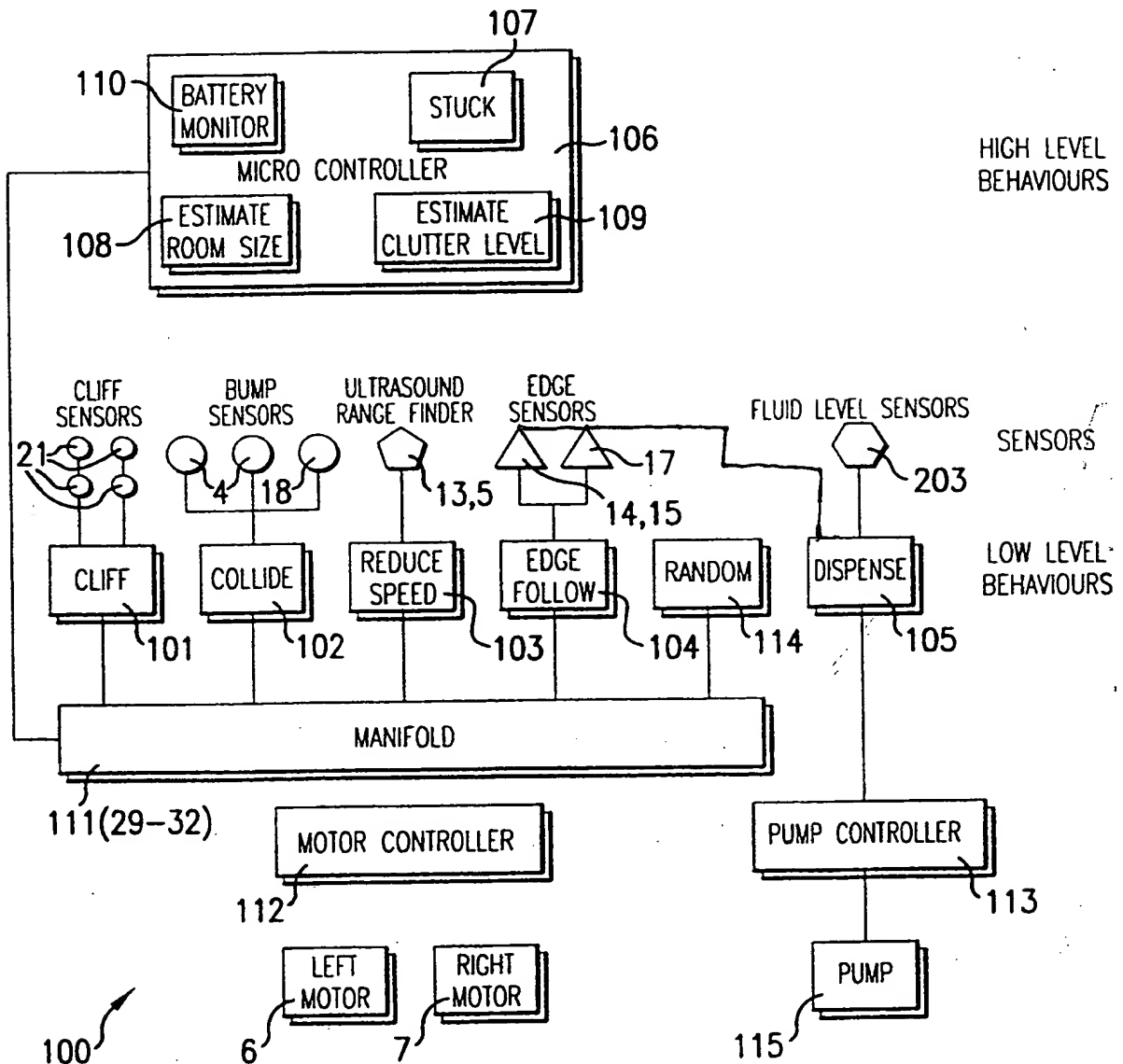


FIG.2